October 7, 2003

Mine Safety and Health Administration

Office of Standards, Regulations, and Variances

1100 Wilson Blvd., Room 2313

Arlington, Virginia 22209-3939

Dear Sir or Madam:

Morton International, Inc., acting through its Morton Salt Division (hereinafter referred to as "Morton") welcomes the opportunity to comment on MSHA's Proposed Rule – Diesel Particulate Matter Exposure of Underground Metal and Nonmetal Miners (30 CFR Part 57) (hereinafter referred to as the "Proposed Rule") and to propose modifications for improvements. We also appreciate MSHA's recent cooperative efforts to resolve our differences over the first workplace diesel exhaust particulate matter exposure limit in the United States. We would like to point out that the interim and partial settlement worked out between the DOL, Methane Awareness Research Group (MARG), the United Steelworkers and the NMA should become the basis for the final rule.

It is the intent of Morton Salt to operate its mines in accordance with all rules and regulations and with the safety and heath of our employees as a paramount concern. Accordingly, Morton has prepared the attached comments and proposed revisions to the Proposed Rule for MSHA's consideration.

We look forward to continued participation in this rulemaking effort.

Sincerely.

G. L. Decker

Vice President of Production and Engineering

Morton Salt Group

Morton International, Inc.

A SUMMARY OF MORTON'S POSITION ON

MSHA'S PROPOSED

DIESEL PARTICULATE MATTER RULE

Morton operates three underground salt mines in the U.S. and three in Canada. We are focused on and committed to continuous improvement in the atmospheres of our mines. Morton has reviewed MSHA's Proposed Rule in great detail and carefully reviewed MSHA's reasoning for the changes in the current Diesel Particulate Rule. Morton has decided to comment on the individual standards, our experience with the filter technology and the final limit. We have left comments on the other matters such as MSHA's health risk assessment and on an updated technological and economic feasibility analysis of the proposed rule to the experts from MARG and NMA as Morton is an active and fully participating member of these groups.

§§ 57.5061 Compliance Determination

(a) MSHA shall use a single sample collected and analyzed by the Secretary in accordance with the requirements of this section as an adequate basis for a determination of noncompliance with the DPM limit.

Comments: The industry relunctantly agreed to a single sample as the basis for a violation during the interim settlement provided that MSHA would consider the results of simultaneous sampling conducted by the mine operator, unusual or abnormal conditions encountered during the work shift, or other factors that would raise questions as to the validity of the sample when considering whether or not to write a citation. If an operator

has taken additional samples which indicate compliance, MSHA should be required to resample with additional samples and if those samples are in compliance, the violation would be considered abated. We urge MSHA to follow this procedure for compliance determination.

§§ 57.5062 Diesel Particulate Matter Control Plan

The proposed rule requires the operator to establish and implement a written plan to control miner exposure when it will take the operator more than 90 calendar days from the date of a citation for violating 57.5060 to achieve compliance.

Comments: During the settlement agreement, the mining industry forcefully argued its opposition to the requirement of a control plan. Compliance with standard 57.5060 is performance based and as such we do not understand the need for a control plan. The requirement for a control plan is strictly bureaucratic and burdensome for operators. This rule requires the operator to comply with the applicable limit of DPM. If compliance cannot be achieved through engineering and/or administrative controls, we are required to use respiratory protection. The end result is that miners are protected from over exposure. The operator will get a citation if the miners are not protected. Also, during the abatement period, the operator has to continue to follow several other standards addressing the maintenance of engines and after-treatment controls, use of low sulfur fuel, proper idling practices and tagging requirements. These standards must be

followed regardless of a control plan. We do not see what additional protection a control plan would provide. We ask MSHA to delete the control plan requirement from the rule.

§§ 57.5075 Diesel Particulate Records

Diesel Particulate Recordkeeping Requirements lists the records the operator must retain pursuant to 57.5060 through 57.5071, and the duration for which particular records need to be retained.

Comments: In line with our recommendation to eliminate the Control Plan requirement, any record keeping related to a control plan should be deleted from this section.

§§ 57.5060(b) Final Concentration Limit

After January 19, 2006, any mine operator covered by this part must limit the concentration of diesel particulate matter to which miners are exposed in underground areas of a mine by restricting the average eight-hour equivalent full shift airborne concentration of total carbon, where miners normally work or travel, to 160 micrograms per cubic meter of air (160TCμg/m3).

Although this section is not a part of this proposed rule, MSHA has sought comments on this section regarding its feasibility. Morton has the following comments.

Morton Salt first began to experiment with filter technology to limit diesel particulate emissions in its mines in 1989. Ventilation was sufficient to maintain gas levels (NO2, CO, CO2) within MSHA regulations. However, there are areas in all mines which are difficult to ventilate and we wanted to improve the environment in these areas. We experimented with wall-flow ceramic exhaust filters on roof-bolters and scalers. Initially, these filters effectively reduced the smoke and were well received by operators, but we quickly found that they plugged causing the engines to lose power. The filters would not reliably regenerate in place, so they had to be removed for cleaning by hand. These events created excessive downtime and maintenance requirements.. Efforts to resolve these problems, including sending the exhaust filters back to the manufacturer for cleaning, were not successful, so, the filters were removed. The cost to run one filter on one machine was approximately $30 per hour. These tests convinced us that installing particulate filters was definitely not a "buy it, install it, run it and forget it" situation.

We then tried catalyzed particulate filters on heavily loaded production equipment such as Load Haul Dump (LHD with 375 hp engine) units. We sought out two filter manufacturers, had them evaluate two of our LHD's for potential successful application of exhaust particulate traps, and per their recommendations, installed a filter on each of two LHD's. The filters cost $13,000 each in 1992. To provide information for evaluation of the test, we also equipped each LHD with exhaust temperature and backpressure sensors with their readings captured by on-board data-loggers. Both exhaust/ filter systems were insulated to assure adequate temperatures were maintained for self-regeneration. One of these filters became plugged and could not be regenerated, even by

the manufacturer, at 1100hrs, producing a cost of operation of $13 per hour just for the trap. The other manufacturer's filter suffered an uncontrolled "runaway" regeneration at about 1500hrs and broke apart allowing raw exhaust to bypass it. More important to us, but not included in these costs, was the lost time that the asset was unavailable for production.

Morton also joined and contributed to the Diesel Engine Emission Project (DEEP) to further scientifically valid research by a coalition of parties. We actively participated in the selection and technical oversight of the projects chosen. Results from the DEEP projects show:

- that each installation in a particular application requires specific engineering.
- that reliability and performance of DPM filters are a significant problem.
- that filters required a very strict maintenance procedure incorporating routine testing and that periodically, the filters had to be removed and carefully cleaned to restore them to allowable backpressure specifications. In an actual production mode, such strict maintenance procedures result in production losses and are not practical due to cost constraints and equipment availability issues.
- that the inherent leakage in the exhaust system became a significant source of DPM.
- that much further research and development efforts are required to make filter technology feasible and less burdensome on the operator.

The following NIOSH statement (appeared in the Preamble) supports our conclusions of the DEEP project results (Federal Register, Vol 68, No. 157, Page 48696) .

> " [The DEEP program] has shown that these filters have significant potential for reducing DPM exposure of miners, but that there are numerous technical and operational issues that need to be addressed through research and in-mine evaluations before they can be readily implemented on a broad-based scale in U.S. mines."

In spite of this clear statement from NIOSH regarding unresolved technical and operation issues at mines, MSHA continue to argue that most mine operators can successfully resolve their implementation issues if they make informed decisions regarding filter selection, retrofitting, engine and equipment deployment, operations, and maintenance.

We strongly believe that MSHA is looking at only one aspect of the filter technology, i.e. DPM reduction efficiency. MSHA has chosen to ignore retrofitting problems, vigorous maintenance requirements and economic feasibility. We would like MSHA to reconsider various tests by DEEP, Stillwater Mining, Kennecott Greens Creek and other mines (including our own) before declaring that DPF technology is both "commercially available" and "mine worthy" to effectively reduce miners exposure to DPM.

Reliability, performance and the viability of the current filter technology is questionable based on DEEP projects and other tests by U.S. mines. We believe that MSHA allowed extensions for compliance with the interim limit, because MSHA knew that the majority of the U.S. mines would have difficulty in achieving the interim limit. If that is so, then these companies will be forced out of business if a final limit, lower than the interim

limit, is adopted. There is no scientific basis for the interim limit and no valid reason to further reduce that limit. We do not believe that the 160 limit is feasible and therefore, we urge MSHA to delete the requirement from this rulemaking. We also would like to point out that the research and development on emission reduction should be left to equipment, engine and filter manufacturers and that burden should not be imposed on mine operators.

We defer our comments on economic feasibility and risk assessment of the final limit to our MARG experts.

Feasibility

We are concerned with the agency's decision that a 25% or greater reduction in DPM exposure from a control or a combination of controls is considered significant and feasible. For example, a mine ventilation system operating near a maximum capacity could cost more than a $1MM to increase intake air volume by less than 10% resulting in a 3-4% DPM reduction and a less than $100M administrative control of reducing an LHD fleet of three machines/shift to two machines/shift by extending the mining operation from a two-shift to a three-shift operation could result in a 21-22% DPM reduction. The above combination of the controls could be considered feasible by MSHA even if the ventilation change could cost a significant amount for a tiny reduction in DPM. This will force operators to spend significant amount of funds for insignificant improvement in DPM. Introducing a combination of controls into the feasibility

decision is bad policy. We urge MSHA to remove the combination of controls from the feasibility consideration.

We hope that MSHA will consider these comments and revise the final rule accordingly.

From: Sexauer, Edward J - MSHA
Sent: Tuesday, October 14, 2003 5:18 PM
To:
Subject: FW: Comments on the Proposed DPM Rule

Morton Comments to the propose...

-----Original Message-----
From: Pat C Patel [mailto:ppatel@mortonsalt.com]
Sent: Tuesday, October 14, 2003 4:42 PM
To: comments@msha.gov
Subject: Comments on the Proposed DPM Rule

Morton Salt of Morton International, Inc has prepared its comments on the recently proposed DPM rule on the interim limit. These comments are attached below for your kind consideration. (See attached file: Morton Comments to the proposed DPM rule -final 10-14-03.doc)